

## Ancillary Equipment SP5, CTU11/12 & ILC4

To facilitate the implementation of complex loop designs such as those required for very large area coverage, spill control, metal loss compensation or balcony coverage, Ampetronic provide a range of ancillary equipment.

Ampetronic often design Audio Induction Loop Systems that are more complex than the simple 'wire-around-wall' installations when customers require specialised systems or have demanding specifications to meet. These systems vary from very large area requirements such as cathedrals, sports halls, etc. to irregular-shaped areas, loop systems requiring low-spillover for confidentiality, or proximity to other induction loops. Modern buildings often incorporate large amounts of metal in their structures, and the frequency dependent losses caused by this require special attention. For many of the special situations listed above, and others, Ampetronic have a range of special products that enable these requirements to be met with essentially 'standard' units. For the majority of situations, these units are set up in the factory for a particular location, and this is part of our design support work.



The charge for design and set-up of the ILC4 and CTU11/12 are included in the equipment cost. The cost of loop layout design (often needed in complex applications) is separate.

### Features

- **True 90° phase shift across audio band**
- **Compatible with all Ampetronic's professional Induction loop driver range**
- **Supplied complete with interconnecting leads**
- **Integral metal Loss Correction Control**

### Applications include

- **Ultra-Low Spill™ systems**
- **Metal loss compensation**
- **Balcony cover**
- **Large area cover:**
  - Stadium
  - Theatres
  - Cinemas
  - Cathedrals
  - Sports Halls

### SP5 Signal Processor

The SP5 is a signal processor which introduces a phase shift across the audio band between two separate amplifiers. When specified with a suitable loop design, it is used for a variety of system applications.

- **Large area systems**
- **Rooms with structural metal**
- **Theatres with balconies**
- **Confidential systems**
- **Adjacent locations**

An Ultra-Low Spill™ Induction Loop System uses two carefully designed loop arrays, which are overlaid in the same area, and are driven by two loop drivers. This type of design can reduce the spill field from the loop within 1.5m of the loop perimeter. To minimise any unwanted interaction between the two arrays, the SP5 creates a 90° phase difference between the signals into the amplifiers. The SP5 also incorporates Ampetronic's Metal Loss Correction system.

This same phase shift requirement may also exist when driving balconies which overhang a seating area. The phase shift minimises the interaction between the two loops to deliver a uniform field strength on both floor levels.

To greatly reduce the effect of loss due to metal in the building construction, two arrays are often used (as for Ultra-Low Spill™). In both cases careful design of the complex loop layout is essential. Ampetronic can offer this design service.

The SP5 is built into a standard 1/6th rack width unit. Rack mounting trays and blanking plates can also be provided.

The SP5 is supplied with the required power lead and input and output signal leads.



### CTU11/12 Current Ratio Transformer

The CTU11 Current ratio Transformer can often be used where the voltage or current demands of a loop would normally exceed the capabilities of the ILD1000G loop driver.

The unit is factory configured to maximise efficiency by matching the loop driver with the loop impedance; this avoids the need to specify two amplifiers as long as the loop driver has sufficient VA.

The CTU11 can also be used to reduce loop current where both a small and large area need to be driven with the same loop signal (such as in nave / channel applications).

Always contact Ampetronic when considering the use of the CTU11/12 as there are a wide range of transformation options.



### ILC4 Combining Unit

The ILC4 is integral to Ampetronic's Parallel driveT technology and is designed to hold up to 4 ratio transformers. The unit is designed to sum the output currents of multiple Loop Drivers to cope with high current and voltage loop demands. The units are factory configured to match the loop amplifier(s) with the actual loop impedance for maximum efficiency.

This enables very large areas to be covered; it can also be used with loop applications where high very metal loss is expected. Using the master - slave system found on our professional loop driver product range, areas up to 4000 m<sup>2</sup> (43000 ft<sup>2</sup>) can be successfully covered.

Always contact Ampetronic when considering the use of the ILC4 as there are a wide range of transformation options.

The ILC4 is built into a standard 2U high rack mount case supplied with rack mount hardware.

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